

SEQUENCE LISTING

<110> CASSART, JEAN-PAUL
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GAULIS, SWANN
CABEZON, TERESA
COCHE, THIERRY

<120> TUMOUR-SPECIFIC ANIMAL PROTEINS

<130> BC45300

<140> TO BE ASSIGNED

<141> 2003-08-28

<150> 10/226,872

<151> 2002-08-23

<150> PCT/EP01/01779

<151> 2001-02-16

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<151> 2000-02-23

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<151> 2000-04-20

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<151> 2001-05-16

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<213> Homo sapiens

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Ala Ala Ala Val Ala Arg Arg Asn Glu Arg Glu Arg Asn Arg Val Lys
50 55 60
Leu Val Asn Leu Gly Phe Gln Ala Leu Arg Gln His Val Pro His Gly
65 70 75 80
Gly Ala Ser Lys Lys Leu Ser Lys Val Glu Thr Leu Arg Ser Ala Val
85 90 95
Glu Tyr Ile Arg Ala Leu Gln Arg Leu Leu Ala Glu His Asp Ala Val
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Arg Asn Ala Leu Ala Gly Gly Leu Arg Pro Gln Ala Val Arg Pro Ser
115 120 125
Ala Pro Arg Gly Pro Pro Gly Thr Thr Pro Val Ala Ala Ser Pro Ser
130 135 140
Arg Ala Ser Ser Ser Pro Gly Arg Gly Gly Ser Ser Glu Pro Gly Ser
145 150 155 160

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Ser Pro Ala Glu Arg Glu Leu Leu Asp Phe Ser Ser Trp Leu Gly Gly
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<210> 3

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<213> Homo sapiens

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| 20 | 25 | 30 | |
| Arg Ala Pro Gln Asp Ser Ala Arg Leu Arg Ser Arg Cys Arg Pro Thr | | | |
| 35 | 40 | 45 | |
| Ser Arg Arg Asn Ala Gly Ser Arg Ala Pro Ser Cys Pro Arg Gly Pro | | | |
| 50 | 55 | 60 | |
| Gly Thr Lys Lys Arg Gly Arg Ala Arg Arg Arg Pro Gly Trp Ser Leu | | | |
| 65 | 70 | 75 | 80 |
| Ala Ala Arg Gly Ala Gln Thr Ala Ala Arg Pro Ala Ala Ser Ala Leu | | | |
| 85 | 90 | 95 | |
| Pro Pro Ala Arg Cys Ala Arg Arg Arg Ala Arg Pro Ala Gly Ala Ala | | | |
| 100 | 105 | 110 | |
| Ala Arg Gly Cys Thr Pro Arg Leu Ser Ala Ala Ser Pro Pro Cys Ser | | | |
| 115 | 120 | 125 | |
| Ala Ser Cys Trp Arg Arg Arg Ala Ala Arg Ala Ala Ala Pro Gly | | | |
| 130 | 135 | 140 | |
| Ser Pro Ser Ser Pro Ala Ser Arg Gly Cys Ala Arg Ala His Cys Ala | | | |
| 145 | 150 | 155 | 160 |
| Ala Leu Arg Pro Leu Arg Arg Leu Arg Ser Leu Arg Trp Pro Val Ala | | | |
| 165 | 170 | 175 | |
| Ala Ala Gly Cys Ser Ala Thr Val Pro Gly Thr Arg Val Ser Ala Gly | | | |
| 180 | 185 | 190 | |
| Gln Arg Ser Arg Gln Gly Arg Gly Ala Gln Gly Ala Arg Thr Trp Ala | | | |
| 195 | 200 | 205 | |
| Val Cys Arg Arg Pro Ser Arg Leu His Pro Pro Ala Arg Ser Arg Ser | | | |
| 210 | 215 | 220 | |
| Arg Arg Ala Ala Gly Arg Cys Arg Gln Arg Asn Arg Arg Arg Arg Gly | | | |
| 225 | 230 | 235 | 240 |
| Lys Leu Trp Arg Pro Lys Gly Ala Ser Gly Thr Ala Pro Pro Gly Asn | | | |
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| Ser Pro Gly His Ala Ser | | | |
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<211> 1830

<212> DNA

<213> Homo sapiens

<400> 4

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<210> 5

<211> 587

<212> DNA

<213> Homo sapiens

<400> 5

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<210> 6

<211> 1791

<212> DNA

<213> Homo sapiens

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<210> 7

<211> 361

<212> PRT

<213> Homo sapiens

<400> 7

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| Arg | Lys | Asn | Leu | Gln | Val | Leu | Val | Pro | Pro | Ala | Pro | Leu | Gln | Ser | Arg |
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| Ser | Cys | Gly | Glu | Gly | Arg | Arg | Arg | Arg | Lys | Pro | Pro | Ala | Leu | Met | Gly |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Pro | Ala | Pro | Ser | Pro | Phe | Pro | Pro | Arg | His | Trp | Ser | Gly | Trp | Ala | Gly |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Arg | Thr | Arg | Arg | Arg | Arg | Arg | Cys | Gly | Gly | Trp | Trp | Val | Gly | Pro | Arg |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Leu | Ala | Gly | Gly | Gly | Ala | Arg | Ala | Arg | Ser | Thr | Leu | Ala | Gly | Phe | Pro |
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| Gly | Asp | Glu | Ala | Arg | Arg | Pro | Val | Arg | Ser | Gly | Phe | Arg | Gly | Leu | Arg |
| | | 100 | | | | | | 105 | | | | | 110 | | |
| Leu | Ile | Arg | Ser | Arg | Ala | Leu | Ser | Ser | Pro | Leu | Thr | Ser | Trp | Arg | Ser |
| | 115 | | | | | | 120 | | | | | 125 | | | |
| Arg | Val | Ala | Arg | Ala | Pro | Gln | Asp | Ser | Ala | Arg | Leu | Arg | Ser | Arg | Cys |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Arg | Pro | Thr | Ser | Arg | Arg | Asn | Ala | Gly | Ser | Arg | Ala | Pro | Ser | Cys | Pro |
| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Arg | Gly | Pro | Gly | Thr | Lys | Lys | Arg | Gly | Arg | Ala | Arg | Arg | Arg | Pro | Gly |
| | | | 165 | | | | | 170 | | | | | 175 | | |
| Trp | Ser | Leu | Ala | Ala | Arg | Gly | Ala | Gln | Thr | Ala | Ala | Arg | Pro | Ala | Ala |
| | | 180 | | | | | | 185 | | | | 190 | | | |
| Ser | Ala | Leu | Pro | Pro | Ala | Arg | Cys | Ala | Arg | Arg | Arg | Ala | Arg | Pro | Ala |
| | 195 | | | | | | 200 | | | | | 205 | | | |
| Gly | Ala | Ala | Ala | Arg | Gly | Cys | Thr | Pro | Arg | Leu | Ser | Ala | Ala | Ser | Pro |

| | | |
|---|-----|-----|
| 210 | 215 | 220 |
| Pro Cys Ser Ala Ser Cys Trp Arg Arg Arg Ala Ala Arg Ala Ala Ala | | |
| 225 | 230 | 235 |
| Ala Pro Gly Ser Pro Ser Ser Pro Ala Ser Arg Gly Cys Ala Arg Ala | | 240 |
| | 245 | 250 |
| His Cys Ala Ala Leu Arg Pro Leu Arg Arg Leu Arg Ser Leu Arg Trp | | 255 |
| | 260 | 265 |
| Pro Val Ala Ala Ala Gly Cys Ser Ala Thr Val Pro Gly Thr Arg Val | | 270 |
| | 275 | 280 |
| Ser Ala Gly Gln Arg Ser Arg Gln Gly Arg Gly Ala Gln Gly Ala Arg | | 285 |
| | 290 | 300 |
| Thr Trp Ala Val Cys Arg Arg Pro Ser Arg Leu His Pro Pro Ala Arg | | |
| 305 | 310 | 315 |
| Ser Arg Ser Arg Arg Ala Ala Gly Arg Cys Arg Gln Arg Asn Arg Arg | | 320 |
| | 325 | 330 |
| Arg Arg Gly Lys Leu Trp Arg Pro Lys Gly Ala Ser Gly Thr Ala Pro | | 335 |
| | 340 | 345 |
| Pro Gly Asn Ser Pro Gly His Ala Ser | | 350 |
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<211> 849

<212> DNA

<213> Influenzae virus and Homo sapiens

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<210> 9

<211> 849

<212> DNA

<213> Influenzae virus and Homo sapiens

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<210> 10

<211> 282

<212> PRT

<213> Influenzae virus and Homo sapiens

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35 40 45
Thr Leu Gly Leu Asp Ile Glu Thr Ala Thr Arg Ala Gly Lys Gln Ile
50 55 60
Val Glu Arg Ile Leu Lys Glu Glu Ser Asp Glu Ala Leu Lys Met Thr

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65 | | 70 | | 75 | | 80 | | | | | | | | | |
| Met | Asp | Gly | Gly | Thr | Leu | Pro | Arg | Ser | Ala | Pro | Pro | Ala | Pro | Pro | Val |
| | | 85 | | | | | | 90 | | | | | 95 | | |
| Pro | Val | Gly | Cys | Ala | Ala | Arg | Arg | Arg | Pro | Ala | Ser | Pro | Glu | Leu | Leu |
| | | 100 | | | | | | 105 | | | | | 110 | | |
| Arg | Cys | Ser | Arg | Arg | Arg | Arg | Pro | Ala | Thr | Ala | Glu | Thr | Gly | Gly | Gly |
| | | 115 | | | | | | 120 | | | | | 125 | | |
| Ala | Ala | Ala | Val | Ala | Arg | Arg | Asn | Glu | Arg | Glu | Arg | Asn | Arg | Val | Lys |
| | | 130 | | | | | | 135 | | | | | 140 | | |
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| 145 | | | | | 150 | | | | | 155 | | | | 160 | |
| Gly | Ala | Ser | Lys | Lys | Leu | Ser | Lys | Val | Glu | Thr | Leu | Arg | Ser | Ala | Val |
| | | | 165 | | | | | | 170 | | | | | 175 | |
| Glu | Tyr | Ile | Arg | Ala | Leu | Gln | Arg | Leu | Leu | Ala | Glu | His | Asp | Ala | Val |
| | | 180 | | | | | | 185 | | | | | 190 | | |
| Arg | Asn | Ala | Leu | Ala | Gly | Gly | Leu | Arg | Pro | Gln | Ala | Val | Arg | Pro | Ser |
| | | 195 | | | | | | 200 | | | | | 205 | | |
| Ala | Pro | Arg | Gly | Pro | Pro | Gly | Thr | Thr | Pro | Val | Ala | Ala | Ser | Pro | Ser |
| | | 210 | | | | | 215 | | | | | 220 | | | |
| Arg | Ala | Ser | Ser | Ser | Pro | Gly | Arg | Gly | Gly | Ser | Ser | Glu | Pro | Gly | Ser |
| 225 | | | | | 230 | | | | | 235 | | | | 240 | |
| Pro | Arg | Ser | Ala | Tyr | Ser | Ser | Asp | Asp | Ser | Gly | Cys | Glu | Gly | Ala | Leu |
| | | | 245 | | | | | | 250 | | | | | 255 | |
| Ser | Pro | Ala | Glu | Arg | Glu | Leu | Leu | Asp | Phe | Ser | Ser | Trp | Leu | Gly | Gly |
| | | 260 | | | | | | 265 | | | | | 270 | | |
| Tyr | Thr | Ser | Gly | His | His | His | His | His | His | | | | | | |
| | | 275 | | | | | | 280 | | | | | | | |

<210> 11
 <211> 193
 <212> PRT
 <213> Homo sapiens

<400> 11

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Tyr | Ser | Thr | Ala | Glu | Arg | Ser | Val | Ser | Thr | Leu | Leu | Ser | Phe | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Leu | Ala | Pro | Pro | Cys | Gly | Thr | Cys | Cys | Arg | Ser | Ala | Trp | Lys | Pro | Lys |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Phe | Thr | Ser | Phe | Thr | Arg | Leu | Arg | Ser | Arg | Ser | Leu | Arg | Arg | Ala | Thr |

| | | |
|---|-----|-----|
| 35 | 40 | 45 |
| Ala Ala Ala Pro Pro Pro Val Ser Ala Val Ala Gly Arg Arg Arg Arg | | |
| 50 | 55 | 60 |
| Leu Gln Arg Asn Ser Ser Gly Asp Ala Gly Leu Arg Arg Ala Ala Gln | | |
| 65 | 70 | 75 |
| Pro Thr Gly Thr Gly Gly Ala Gly Gly Ala Asp Leu Gly Ser Val Pro | | |
| 85 | 90 | 95 |
| Pro Ser Ile Ala Pro Ala Ser Thr Arg Pro Leu Gln Val Pro Ala Arg | | |
| 100 | 105 | 110 |
| Arg Arg Lys Val Gln Ala Glu Glu Pro Glu Ala Thr Gly Lys Thr Val | | |
| 115 | 120 | 125 |
| Ala Pro Gln Gly Gly Phe Trp His Gly Ala Ala Arg Gln Leu Pro Arg | | |
| 130 | 135 | 140 |
| Ala Arg Val Leu Gly Arg Leu Glu Pro Gly Asp Arg Arg Pro Ser Gly | | |
| 145 | 150 | 155 |
| Gly Arg Pro Tyr Ala Pro Gly Ser Val Gly Arg Ser Cys Pro Ala Arg | | |
| 165 | 170 | 175 |
| Ala Ala Gly Leu Ser Gln Val Ser Ala Gly Ala Ala Gln Ala Ala Gly | | |
| 180 | 185 | 190 |
| Phe | | |

<210> 12
 <211> 263
 <212> PRT
 <213> Mus musculus

<400> 12

| |
|---|
| Met Glu Ala His Leu Asp Trp Tyr Gly Val Pro Gly Leu Gln Glu Ala |
| 1 5 10 15 |
| Ser Asp Ala Cys Pro Arg Glu Ser Cys Ser Ser Ala Leu Pro Glu Ala |
| 20 25 30 |
| Arg Glu Gly Ala Asn Val His Phe Pro Pro His Pro Val Pro Arg Glu |
| 35 40 45 |
| His Phe Ser Cys Ala Ala Pro Glu Leu Val Ala Gly Ala Gln Gly Leu |
| 50 55 60 |
| Asn Ala Ser Leu Met Asp Gly Gly Ala Leu Pro Arg Leu Met Pro Thr |
| 65 70 75 80 |
| Ser Ser Gly Val Ala Gly Ala Cys Ala Ala Arg Arg Arg Gln Ala Ser |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 85 | | 90 | | 95 | | | | | | | | | | |
| Pro | Glu | Leu | Leu | Arg | Cys | Ser | Arg | Arg | Arg | Arg | Ser | Gly | Ala | Thr | Glu |
| | 100 | | 105 | | 110 | | | | | | | | | | |
| Ala | Ser | Ser | Ser | Ser | Ala | Ala | Val | Ala | Arg | Arg | Asn | Glu | Arg | Glu | Arg |
| | 115 | | 120 | | 125 | | | | | | | | | | |
| Asn | Arg | Val | Lys | Leu | Val | Asn | Leu | Gly | Phe | Gln | Ala | Leu | Arg | Gln | His |
| | 130 | | 135 | | 140 | | | | | | | | | | |
| Val | Pro | His | Gly | Gly | Ala | Asn | Lys | Lys | Leu | Ser | Lys | Val | Glu | Thr | Leu |
| 145 | | | 150 | | 155 | | | | | | | | | | 160 |
| Arg | Ser | Ala | Val | Glu | Tyr | Ile | Arg | Ala | Leu | Gln | Arg | Leu | Leu | Ala | Glu |
| | 165 | | 170 | | 175 | | | | | | | | | | |
| His | Asp | Ala | Val | Arg | Ala | Ala | Leu | Ala | Gly | Gly | Leu | Leu | Thr | Pro | Ala |
| | 180 | | 185 | | 190 | | | | | | | | | | |
| Thr | Pro | Pro | Ser | Asp | Glu | Cys | Ala | Gln | Pro | Ser | Ala | Ser | Pro | Ala | Ser |
| | 195 | | 200 | | 205 | | | | | | | | | | |
| Ala | Ser | Leu | Ser | Cys | Ala | Ser | Thr | Ser | Pro | Ser | Pro | Asp | Arg | Leu | Gly |
| | 210 | | 215 | | 220 | | | | | | | | | | |
| Cys | Ser | Glu | Pro | Thr | Ser | Pro | Arg | Ser | Ala | Tyr | Ser | Ser | Glu | Glu | Ser |
| 225 | | | 230 | | 235 | | | | | | | | | | 240 |
| Ser | Cys | Glu | Gly | Glu | Leu | Ser | Pro | Met | Glu | Gln | Glu | Leu | Leu | Asp | Phe |
| | 245 | | 250 | | 255 | | | | | | | | | | |
| Ser | Ser | Trp | Leu | Gly | Gly | Tyr | | | | | | | | | |
| | 260 | | | | | | | | | | | | | | |

<210> 13

<211> 1051

<212> DNA

<213> Mus musculus

<220>

<221> unsure

<222> (810)

<223> Wherein n can be a, c, t, or g

<400> 13

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gaagcgcacg gtgtcagctt tgcagaatgt gtacaccaag gggagggcgga ggcgaaggaa 120
ggagggcgta agaaaggagg cgggtggcggg gcggaggaga ttatctatac tttttaaaaa 180
aaaggagcct cttagccgcg taaaggagac ttggggagcgc cctgacagca cgcgcgggac 240

```

```

acgagagtac cacgcttccc tactcttttc agaccttgac tggtagcggg tcccaggact 300
gcaggaggcc agcgacgcgt gccctaggga gtcctgcagc agtgccctgc ctgaggcccc 360
tgaagggtgca aacgtccact tcccaccgca cccgggttcct cgcgagcact ttctctgtgc 420
cgcaccagaa ctcgtagcag gggcccaggg gctgaatgca agcttgatgg acggcggcgc 480
gctgcccaga ctcattgccc cctcgtctgg agtcgctgga gcctgcgctg ctcggcggag 540
acaagcgtct ccggaattgc tgcgctgcag ccggcggcgg cgatctggag caaccgaggc 600
cagcagcagc tcggcgtccg tggcacgccg caatgagcgc gagcgcaacc gcgtaaagct 660
ggtaaaacttg ggcttccagg cgctgcggca gcacgtgccg cacggcggcg ccaacaagaa 720
gctgagtaag gtggagacgc tgcgctccgc ggtagagtac attcgtgcgc tgcagcggct 780
gctcgagag cacgacacgg tgcggccggn gctcgtggg gggctgttaa caccgctac 840
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cgcctctacg tctccgtccc ggaccctggg ctgctctgag cctacctccc cgcgctccgc 960
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tgacttttcc agttgggttag ggggctactg a 1051

```

<210> 14

<211> 260

<212> PRT

<213> Rattus rattus

<400> 14

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 1             5             10            15
Ser Asp Ala Cys Pro Arg Glu Ser Cys Ser Ser Ala Leu Pro Glu Ala
      20             25            30
Arg Glu Gly Ala Asn Val His Phe Pro Pro His Pro Val Pro Arg Glu
      35             40            45
His Phe Ser Cys Gly Ala Pro Lys Pro Val Ala Gly Ala Pro Ala Leu
      50             55            60
Asn Ala Ser Leu Met Asp Gly Gly Ala Leu Pro Arg Leu Val Pro Thr
65             70             75            80
Ser Ser Gly Val Ala Gly Ala Cys Thr Ala Arg Arg Arg Pro Pro Ser
      85             90            95
Pro Glu Leu Leu Arg Cys Ser Arg Arg Arg Arg Ser Gly Ala Thr Glu
      100            105            110
Ala Ser Ser Ser Ser Ala Ala Val Ala Arg Arg Asn Glu Arg Glu Arg
      115            120            125
Asn Arg Val Lys Leu Val Asn Leu Gly Phe Gln Ala Leu Arg Gln His
      130            135            140
Val Pro His Gly Gly Ala Asn Lys Lys Leu Ser Lys Val Glu Thr Leu

```

| | | | |
|---|-----|-----|-----|
| 145 | 150 | 155 | 160 |
| Arg Ser Ala Val Glu Tyr Ile Arg Ala Leu Gln Arg Leu Leu Ala Glu | | | |
| | 165 | 170 | 175 |
| His Asp Ala Val Arg Ala Ala Leu Ser Gly Gly Leu Leu Thr Pro Ala | | | |
| | 180 | 185 | 190 |
| Thr Arg Pro Ser Asp Val Cys Thr Gln Pro Ser Ala Ser Pro Ala Ser | | | |
| | 195 | 200 | 205 |
| Ala Ser Leu Ser Cys Thr Ser Thr Ser Pro Asp Arg Leu Gly Cys Ser | | | |
| | 210 | 215 | 220 |
| Glu Pro Ala Ser Pro Arg Ser Ala Tyr Ser Ser Glu Asp Ser Ser Cys | | | |
| 225 | 230 | 235 | 240 |
| Glu Gly Glu Thr Tyr Pro Met Gly Gln Met Phe Asp Phe Ser Asn Trp | | | |
| | 245 | 250 | 255 |
| Leu Gly Gly Tyr | | | |
| 260 | | | |

<210> 15

<211> 1526

<212> DNA

<213> Rattus rattus

<400> 15

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gagtgcggga cgtgcggagc gcagttcggg atctgcactc gaggacttgt cgaggacgca 180
ttaagctaag catctgctcg gagcatggaa tcgcacttta actggtacgg ggtcccaagg 240
ctccagaagg ctacgcagcg gtgccctagg gaatcctgca gcagtgcctt gcctgaggcc 300
cgtgaagggt cgaacgtcca ctccccaccg caccgcggtt ctcgcgagca cttttcctgt 360
ggcgccaccg aaccgcgtagc gggggccccc gcgctgaatg caagcttgat ggacggcggc 420
gcgctgcccc gactcgtgcc cacctcgtct ggagtcgctg gacgctgcac tgctcggcgg 480
agacccccgt ccccggaact gcttcgctgc agccgacggc ggcgatcggg agcaaccgag 540
gccagcagca gctcggcggc cgtggcacgc cgcaatgagc gtgagcgcaa ccgcgtaaag 600
ctggtaaaact tgggcttcca ggcgctgcgg cagcacgtgc cgcacggcgg cgccaacaag 660
aagctgagta aggtggagac gctgcgctcc gcggtagagt acatccgtgc gctgcagcgg 720
ctgctagcag agcacgacgc ggtgcgtgct gcgctctctg ggggtctatt aacaccgct 780
actcgccgtt ccgatgtgtg cagcgagccc tcgcctccc ctgccagcgc gtctctgtcc 840
tgcacctcta catccccaga ccgcctaggc tgctccgagc ctgcctctcc gcgctccgcc 900
tactcgtcgg aggacagcag ctgcgagggg gagacttacc cgatggggca gatgtttgac 960
ttttccaatt ggtagggggg ctactgagca cccacacccc ctaagctgcg tccttgggtg 1020

```

tcccctggtg gacctacctg cgtttcttgc ccaggaaacc tgggcccacg ccttaccat 1080
 gctgtctagt gcagcctgac caaatgccaa gtactgacct ctgctcggcc tccacgcgc 1140
 ggaatgacat cttccatctc ccagtccttg ccgaaccagg acttggaat ttctcaggag 1200
 aaagaatttt acaatgacaa tctgcttttt atcaattaac ttgaactgct ggaggactct 1260
 gctgaaaata tgaagaatta tttttataca aaggatcctt aagcttggag cacaataaag 1320
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 ggtcggggccc tgagggcaag atgcctggct gcacccttct tcctcttccg aagcctatcc 1440
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<210> 16

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<212> PRT

<213> Homo sapiens

<400> 16

Lys Leu Val Asn Leu Gly Phe Gln Ala Leu

1 5 10

<210> 17

<211> 9

<212> PRT

<213> Homo sapiens

<400> 17

Glu Leu Leu Asp Phe Ser Ser Trp Leu

1 5

<210> 18

<211> 9

<212> PRT

<213> Homo sapiens

<400> 18

Arg Leu Leu Ala Glu His Asp Ala Val

1 5

<210> 19
<211> 9
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<400> 19
Lys Leu Val Asn Leu Gly Phe Gln Ala
1 5

<210> 20
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<400> 20
Glu Tyr Ile Arg Ala Leu Gln Arg Leu
1 5

<210> 21
<211> 10
<212> PRT
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<400> 21
Glu Tyr Ile Arg Ala Leu Gln Arg Leu Leu
1 5 10

<210> 22
<211> 10
<212> PRT
<213> Homo sapiens

<400> 22
Ala Val Arg Asn Ala Leu Ala Gly Gly Leu
1 5 10

<210> 23
<211> 10
<212> PRT
<213> Homo sapiens

<400> 23
Ser Glu Pro Gly Ser Pro Arg Ser Ala Tyr
1 5 10

<210> 24
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<400> 24
Val Glu Thr Leu Arg Ser Ala Val Glu Tyr
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<210> 25
<211> 9
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<400> 25
Ile Arg Ala Leu Gln Arg Leu Leu Ala
1 5

<210> 26
<211> 9
<212> PRT
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<400> 26
Leu Arg Pro Gln Ala Val Arg Pro Ser
1 5

<210> 27
<211> 9
<212> PRT
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<400> 27
Leu Arg Gln His Val Pro His Gly Gly
1 5

<210> 28
<211> 9
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<400> 28
Leu Gly Phe Gln Ala Leu Arg Gln His
1 5

<210> 29
<211> 9
<212> PRT
<213> Homo sapiens

<400> 29
Val Arg Asn Ala Leu Ala Gly Gly Leu
1 5

<210> 30
<211> 9
<212> PRT
<213> Homo sapiens

<400> 30
Tyr Ile Arg Ala Leu Gln Arg Leu Leu
1 5

<210> 31
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<212> PRT
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<400> 31
Leu Val Asn Leu Gly Phe Gln Ala Leu
1 5

<210> 32
<211> 9
<212> PRT
<213> Homo sapiens

<400> 32
Val Glu Tyr Ile Arg Ala Leu Gln Arg
1 5

<210> 33
<211> 9
<212> PRT
<213> Homo sapiens

<400> 33
Leu Leu Arg Cys Ser Arg Arg Arg Arg
1 5

<210> 34
<211> 654
<212> DNA
<213> Homo sapiens

<400> 34
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cccaggtccg cgccccctgc gccccccgct cctgtcggct gcgctgcccg gcggagaccc 120
gcgtccccgg aactgtttgc ctgcagccgg cggcggcgac cggccaccgc agagaccgga 180
ggcggcgag cggccgtagc gcggcgcaat gagcgcgagc gcaaccgcgt gaagctggtg 240

aacttgggct tccagggcgt ggggcagcac gtgccgcacg gcggcgccag caagaagctg 300
agcaagggtgg agacgctgcg ctcagccgtg gagtacatcc gcgcgctgca gcgcctgctg 360
gccgagcacg acgccgtgcg caacgcgctg gcgggagggc tgaggccgca ggccgtgcgg 420
ccgtctgcgc cccgcggggc gccagggacc accccggctg ccgcctcgcc ctcccgcgct 480
tcttcgtccc cgggcccgcgg gggcagctcg gagcccggct ccccgcgctc cgcctactcg 540
tcggacgaca gcggctgcga aggcgcgctg agtcctgcgg agcgcgagct actcgacttc 600
tccagctggg taggggggcta cactagtctc gagcaccacc accaccacca ctga 654

<210> 35

<211> 217

<212> PRT

<213> Homo sapiens

<400> 35

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Ser | Met | Thr | Gly | Gly | Gln | Gln | Met | Gly | Arg | Asp | Pro | Met | Asp |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gly | Gly | Thr | Leu | Pro | Arg | Ser | Ala | Pro | Pro | Ala | Pro | Pro | Val | Pro | Val |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gly | Cys | Ala | Ala | Arg | Arg | Arg | Pro | Ala | Ser | Pro | Glu | Leu | Leu | Arg | Cys |
| | | 35 | | | | | 40 | | | | 45 | | | | |
| Ser | Arg | Arg | Arg | Arg | Pro | Ala | Thr | Ala | Glu | Thr | Gly | Gly | Gly | Ala | Ala |
| | 50 | | | | | 55 | | | | 60 | | | | | |
| Ala | Val | Ala | Arg | Arg | Asn | Glu | Arg | Glu | Arg | Asn | Arg | Val | Lys | Leu | Val |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| | | | | | | | | | | | | | | | |
| Asn | Leu | Gly | Phe | Gln | Ala | Leu | Arg | Gln | His | Val | Pro | His | Gly | Gly | Ala |
| | | | 85 | | | | | 90 | | | | | 95 | | |
| Ser | Lys | Lys | Leu | Ser | Lys | Val | Glu | Thr | Leu | Arg | Ser | Ala | Val | Glu | Tyr |
| | | 100 | | | | | 105 | | | | | 110 | | | |
| Ile | Arg | Ala | Leu | Gln | Arg | Leu | Leu | Ala | Glu | His | Asp | Ala | Val | Arg | Asn |
| | | 115 | | | | 120 | | | | | 125 | | | | |
| Ala | Leu | Ala | Gly | Gly | Leu | Arg | Pro | Gln | Ala | Val | Arg | Pro | Ser | Ala | Pro |
| | 130 | | | | 135 | | | | 140 | | | | | | |
| Arg | Gly | Pro | Pro | Gly | Thr | Thr | Pro | Val | Ala | Ala | Ser | Pro | Ser | Arg | Ala |
| 145 | | | | 150 | | | | 155 | | | | | | 160 | |
| Ser | Ser | Ser | Pro | Gly | Arg | Gly | Gly | Ser | Ser | Glu | Pro | Gly | Ser | Pro | Arg |
| | | | 165 | | | | | 170 | | | | 175 | | | |
| Ser | Ala | Tyr | Ser | Ser | Asp | Asp | Ser | Gly | Cys | Glu | Gly | Ala | Leu | Ser | Pro |
| | | 180 | | | | | 185 | | | | | 190 | | | |
| Ala | Glu | Arg | Glu | Leu | Leu | Asp | Phe | Ser | Ser | Trp | Leu | Gly | Gly | Tyr | Thr |

195
Ser Leu Glu His His His His His His
210

200

215

205

<210> 36
<211> 654
<212> DNA
<213> Homo sapiens

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gcttccccgg aactgctgcg ttgctcccggt cgtcgtcgtc cggctaccgc agagaccgga 180
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aacttgggct tccaggcgct gcggcagcac gtgccgcacg gcggcgccag caagaagctg 300
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ccgtctgcgc cccgcggggc gccagggacc accccggctg ccgcctcgcc ctcccgcgct 480
tcttcgtccc cgggccgcgg gggcagctcg gagcccggtt ccccggttc cgcctactcg 540
tcggacgaca gcggctgcga aggcgcgctg agtcctgcgg agcgcgagct actcgacttc 600
tccagctggt tagggggcta cactagtctc gagcaccacc accaccacca ctga 654

<210> 37
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<212> DNA
<213> Homo sapiens

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gcttctccag aactgcttcg ttgttctcgt cgcagacgtc cagctaccgc agagaccgga 180
ggcggcgtag cggccgtagc gcggcgcaat gagcgcgagc gcaaccgcgt gaagctggtg 240
aacttgggct tccaggcgct gcggcagcac gtgccgcacg gcggcgccag caagaagctg 300
agcaaggtgg agacgctgcg ctcagccgtg gagtacatcc gcgcgctgca gcgcctgctg 360
gccgagcacg acgccgtgcg caacgcgctg gcgggagggc tgaggccgca ggccgtgctg 420
ccgtctgcgc cccgcggggc gccagggacc accccggctg ccgcctcgcc ctcccgcgct 480
tcttcgtccc cgggccgcgg gggcagctcg gagcccggtt ccccggttc cgcctactcg 540
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tccagctggt tagggggcta cactagtctc gagcaccacc accaccacca ctga 654